

REMARKS

Claims 1, 3, 5-10, 15, 16, and 19-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074). Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074) and Gutowitz (US 6,219,731). Claims 14, 17, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (US 2002/0034930) in view of Lueders (US 6,067,074) and Ostergard et al. (US 6,704,004). The examiner is requested to reconsider these rejections.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants have amended claim 1 to recite, *inter alia*, "a set of physical switches arranged as a first fixed configuration in a first plane ... a set of mechanical key elements arranged as a second fixed configuration in a second plane wherein the first configuration and the second configuration are in register such that each mechanical key element overlies a corresponding switch such that movement of a mechanical key element by a user physically actuates its corresponding physical switch and wherein each mechanical key element has a length, a width and a height ... a continuous flexible display film, extending beneath the set of mechanical key elements arranged in the second configuration and over the set of physical switches arranged in the first configuration wherein the outer pads of

the mechanical key elements provide a discontinuous raised profile with respect to the continuous flexible display film wherein the continuous flexible display film is configured to fixedly position the set of mechanical key elements in the second configuration ...".

Lueders discloses a touchpad device in which a flexible display portion (32, 34, 36) overlies a printed circuit board (26) comprising a plurality of switches (28). In order to actuate a switch the user makes direct contact with the display portion. As a result of this the display portion flexes to actuate a switch concealed beneath the display portion.

As described above, in Lueders the user makes contact directly with the display portion of the touchpad. Lueders does not disclose mechanical key elements. As a result, the claim feature of: "a set of mechanical key elements arranged as a second fixed configuration in a second plane" is not disclosed by Lueders. For the same reason, Lueders fails to disclose the claim features of "wherein each mechanical key element has a length, a width and a height and comprises a separate outer pad for actuation by a user" and "the outer pads of the mechanical key elements provide a discontinuous raised profile with respect to the continuous flexible display film". Lueders further fails to disclose the claim feature of "the continuous flexible display film is configured to fixedly position the set of mechanical key elements", for the same reason.

Lueders further fails to disclose "a display controller operable to control the continuous flexible display film to have a first display output in which a first set of indicia are displayed in association with the set of mechanical key elements and a second display output in which a second set of indicia, different to the first set of indicia, are displayed in association with the set of mechanical key elements." Accordingly, amended claim 1 is novel over Lueders.

Yamazaki discloses a keypad comprising a number of transparent buttons (603) each located above a separate non-flexible electro-luminescent (EL) display device (604). The EL display devices are located on the top surface of a structure comprising electrical wiring (606), a flexible printed substrate layer (605) and a flexible sheet (607). The buttons protrude through a housing (601). Each EL display device is individually programmable.

As the examiner admits, Yamazaki fails to disclose the feature of "a continuous flexible display film" as recited in claim 1. Accordingly, amended claim 1 is novel over Yamazaki.

Applicants submit that there is no suggestion to combine the references as the examiner is attempting to do (at least not until after reading applicants' patent application). The skilled person would not be motivated to combine the features of Lueders and Yamazaki in order to result in the invention. If the skilled person did combine those features he would not arrive at something which falls within the scope of amended claim 1.

Both Yamazaki and Lueders solve the same technical problem, namely how to provide a more flexible user input device. In Lueders, the flexibility arises by using a flexible display portion over a plurality of switches. When the function of a **switch changes** the legend associated with that switch and displayed on the display portion changes. In Yamazaki, a plurality of keys are placed over a plurality of switches. Each of the keys carries a display portion. The display portion of a key can be individually controlled to display different information associated with the function of the underlying key.

Consequently, as Lueders and Yamazaki both teach self contained solutions to the problem of providing a flexible user input device, there would be no motivation to selectively combine different features from Lueders and Yamazaki. The skilled person is presented with a choice. Either choose to use the teaching of Lueders or choose to use the teaching of Yamazaki.

Nevertheless, if for some reason the skilled person were to try and combine the teaching of Lueders and Yamazaki they would not arrive at the present invention. The skilled person starting from the teaching of Lueders and seeking to incorporate the teaching of Yamazaki, would seek to replace the flexible display portion of Lueders with the keys of Yamazaki. They would thus arrive at a device corresponding to that taught by Yamazaki. There would be absolutely no motivation for the skilled person to retain the flexible display portion of Lueders when they are introducing the keys from Yamazaki.

If the skilled person were to start from the teaching of Yamazaki and seek to incorporate the teaching of Lueders, they would not arrive at the present invention. They would seek to replace the keys of Yamazaki with the flexible display portion of Lueders. They would thus arrive at a device corresponding to that taught by Lueders. There would be no reason for them to retain the keys of Yamazaki when introducing the flexible display portion of Lueders.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (see MPEP 2143.01, page 2100-98, column 1). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (see MPEP 2143.01, page 2100-98, column 2). A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is **not sufficient** to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (see MPEP 2143.01, page 2100-99, column 1) Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). >See also Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161

(Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

It is clear therefore that the skilled person would not combine the teaching of Lueders and Yamazaki and if he did it would not result in the invention. The amended claims are therefore non-obvious over the prior art. Therefore, claim 1 is patentable and should be allowed.

Though dependent claims 3, 5-11, 14, 15, 19 and 20 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comment will be made.

Applicants have amended claim 16 to recite, *inter alia*, "a plurality of mechanical key elements ... arranged as a first fixed configuration in a first plane, wherein each of the plurality of mechanical key elements has a length, a width and a height ... a plurality of physical switches arranged as a second fixed configuration in a second plane, adjacent the second side of the display device, wherein the first configuration and the second configuration are in register such that each mechanical key element overlies a corresponding physical switch such that a movement of a mechanical key element by a user physically actuates its corresponding underlying physical switch ... wherein the display device comprises a continuous flexible display film ... arranged in the first configuration and over the plurality of physical switches wherein the outer pads of the mechanical key elements provide a

discontinuous raised profile with respect to the continuous flexible display film".

Similar to the arguments above with respect to claim 1, in Lueders the user makes contact directly with the display portion of the touchpad. Lueders does not disclose mechanical key elements, and Yamazaki fails to disclose the feature of "a continuous flexible display film". Additionally, applicants submit that there is no suggestion to combine the references as the examiner is attempting to do (at least not until after reading applicants' patent application). If the skilled person did combine those features he would not arrive at something which falls within the scope of amended claim 16. In the present case, there is no teaching, suggestion, or motivation, found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to provide the elements as claimed in claim 16. The features of claim 16 are not disclosed or suggested in the art of record. Therefore, claim 16 is patentable and should be allowed.

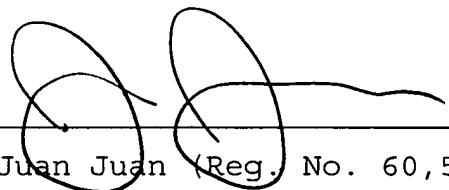
Though dependent claims 17 and 18 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 16. However, to expedite prosecution at this time, no further comment will be made.

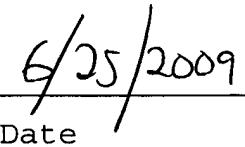
The examiner notes in the Advisory Action that the cancellation of claim 8 as proposed in order to overcome an indefiniteness issue seems to introduce more problems than it fixes. Applicants have therefore added new claim 24 which

incorporates the language of previously canceled claim 8 and changes the term "the display device" to "the continuous flexible display film". Support for this claim may be found on page 6, lines 4 and 5 of the specification under Fig. 2.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is respectfully requested. If there are any additional charges with respect to this Amendment or otherwise, please charge deposit account 50-1924 for any fee deficiency. Should any unresolved issue remain, the examiner is invited to call applicants' attorney at the telephone number indicated below.

Respectfully submitted,

  
Juan Juan (Reg. No. 60,564)

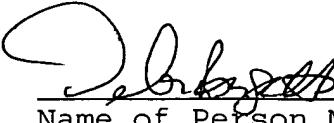
  
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